

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims, in the application:

1. (currently amended) A method for controlling distribution of electronic mail messages communicated from a sender to a receiver via a communications network, the method comprising the steps of:
 - (a) receiving a message intended for delivery to a recipient;
 - (b) identifying a priority level corresponding to the message by reading the priority level from a header of the message;
 - (c) identifying a processing rule for the identified priority level; and
 - (d) delivering the message to the intended recipient in accordance with the processing rule.
2. (canceled)
3. (previously presented) The method of claim 1, wherein step (c) is performed by referencing a rule base.
4. (previously presented) The method of claim 1, wherein steps (a) through (d) are performed at a client device, the method further comprising the step of:
 - (e) transmitting to a network device a preference for receiving messages having the priority level.
5. (canceled)
6. (currently amended) A method for controlling distribution of electronic mail messages communicated from a sender to a receiver via a communications network, the method comprising the steps of:
 - (a) receiving a message intended for delivery to a recipient;
 - (b) identifying a priority level corresponding to the message by reading the priority level from a header of the message;
 - (c) identifying a prescribed delay for the identified priority level; and

(d) delivering the message to the intended recipient after the prescribed delay.

7. (canceled)

8. (canceled)

9. (canceled)

10. (currently amended) The method of claim [[2]] 1, wherein the sender specifies the priority level by selecting the priority level to be assigned to the message from a menu of priority levels displayed to the sender via a graphical user interface.

11. (currently amended) The method of claim [[2]] 1, wherein the priority level is a predetermined priority level to be assigned to a plurality of messages originating from the sender.

12. (original) A method for controlling distribution of network communications via a communications network, the method comprising:

- identifying a plurality of network communications, each being intended for delivery to a respective recipient, each having a respective priority level;
- causing delivery of the plurality of network communications to the respective recipients in an order corresponding to the respective priority levels, wherein certain of the plurality of network communications having a relatively high priority level are delivered before certain of the plurality of network communications having a relatively low priority level.

13. (original) A method for controlling distribution of network communications via a communications network, the method comprising:

- identifying a plurality of network communications, each being intended for delivery to a respective recipient, each having a respective priority level;
- delaying allocation of a network connection for a network communication having a relatively low priority level until after allocation of the network connection for another network communication having a priority level higher than the relatively low priority level.

14. (original) A method for controlling distribution of network communications via a communications network, the method comprising:
- identifying a plurality of network communications, each having a respective priority level, and a respective network path;
 - selectively delaying allocation of a network connection for delivering a network communications having a certain path until after utilization of network resources no longer exceeds a predetermined threshold.
15. (original) A method for controlling distribution of network communications via a communications network, the method comprising:
- identifying a plurality of network communications, each having a respective priority level, and a respective source address;
 - referencing a list of preferred customers' e-mail domains; and
 - delaying a network communication having a source address that does not correspond to any e-mail domain on the list until after transmission of another network communication having a respective source address that does correspond to an e-mail domain on the list.
16. (currently amended) A method for controlling distribution of network communications via a communications network, the method comprising:
- sampling network communications received from a certain sender to determine a level of network communications having a certain characteristic;
 - determining a priority level as a function of the level; and
 - assigning the priority level to ~~other~~ subsequent network communications received from the certain sender.
17. (original) The method of claim 16, wherein the characteristic comprises containing of a virus.
18. (original) The method of claim 16, wherein the characteristic comprises undeliverability of network communication to a respective receiver.
19. (original) The method of claim 16, wherein the characteristic comprises characterization of network communication as spam.

20. (original) The method of claim 19, wherein characterization of the network communication as spam is determined according to a pattern matching technique.
21. (original) An apparatus for controlling distribution of network communications via a communications network, the apparatus comprising:
means for identifying a respective priority for each of a plurality of network communications;
means for allocating network connections for delivery of network communications, said means being configured to provide a prioritization effect whereby connections are allocated for delivery of said plurality of network communications in an order corresponding to respective priorities of said plurality of network communications, a network communication having a relatively high priority being allocated a network connection before another network communication having a relatively low priority.
22. (original) The apparatus of claim 21, whereby said means for allocating network connections provides unnecessary delay for allocation of a network connection for a network communication having a relatively low priority to permit allocation of said network connection for delivery of a network communication having a relatively high priority.
23. (original) The apparatus of claim 21, wherein said delay is provided for any network communications having a certain priority.
24. (original) The apparatus of claim 21, wherein said delay is provided for any network communication received along a certain network path.
25. (original) The apparatus of claim 21, wherein said delay is provided for any network communication originating from a certain sender.
26. (original) The apparatus of claim 21, wherein said delay is provided for any network communication when utilization of network resources exceeds a predetermined threshold.

27. (original) A system for controlling distribution of network communications via a communications network, the system comprising:

- a mail server capable of processing network communications;
- a device capable of determining a respective priority for each of a plurality of network communications; and
- a device capable of allocating network connections for delivery of network communications, said device being specially configured to allocate network connections to provide a prioritization effect whereby a network communication having a relatively high priority is allocated a certain network connection before another network communication having a relatively low priority.

28. (original) The system of claim 27, wherein said mail server is specially configured with software to act as said device capable of determining the respective priority for each of the plurality of network communications.

29. (original) The system of claim 27, wherein device capable of allocating network connections comprises a hardware appliance distinct from said mail server.

30. (original) A network appliance for controlling distribution of network communications via a communications network, the network appliance comprising:

- a heuristic engine for identifying a network path for each of a plurality of network communications received by the network appliance, and for sampling a subset of the plurality of network communications, each network communication of the subset having a common network path;
- a scanner for scanning each network communication of the subset and for determining a value for a sender metric for the network communications of the subset;
- a rules database storing rules for delivering network communications, at least one of the rules correlating the value to a priority level; and
- a connection processor for allocating network connections for delivery of network communications, the connection processor being configured to allocate network connections for certain network communications in an order of

priority corresponding to the certain network communications' respective priority levels, wherein each network communication's respective priority level is assigned according to its respective network path, and the priority level assigned to the subset of network communications having an identical network path.

31. (original) The network appliance of claim 30, further comprising a notification module, the notification module being capable of communicating to another network appliance.
32. (original) The network appliance of claim 30, wherein the notification module is configured to communicate via the communications network.
33. (original) The network appliance of claim 31, wherein the notification module is configured to communicate priority level information for a corresponding network path.
34. (original) The network appliance of claim 31, wherein the notification module is configured to communicate a preference to delay network communications from a certain network path.
35. (original) The network appliance of claim 31, wherein the notification module is configured to communicate a request to reduce a volume of network communications directed to the network appliance.
36. (original) The network appliance of claim 30, wherein the sampling is performed according to a predetermined sampling rate.
37. (original) The network appliance of claim 36, wherein the predetermined sampling rate is stored in the rules database.
38. (original) The network appliance of claim 30, wherein the sampling rate is varied over time.
39. (original) The network appliance of claim 30, wherein the sender metric comprises a virus rate indicating a percentage of the network communications of the subset that carry a virus.

40. (original) The network appliance of claim 30, wherein the sender metric comprises a delivery success rate indicating the percentage of the network communications of the subset that are delivered.
41. (original) The network appliance of claim 30, wherein the sender metric comprises a spam rate indicating a percentage of the network communications of the subset that are determined to be unwanted.
42. (original) The network appliance of claim 41, wherein the determination of whether a certain network communication is unwanted is determined by content-based analysis.
43. (original) The network appliance of claim 41, wherein the determination of whether a certain network communication is unwanted is determined by pattern matching.
44. (original) The network appliance of claim 30, wherein the rules database further comprises a prescribed delay corresponding to the priority level.
45. (original) The network appliance of claim 44, wherein the prescribed delay comprises a fixed period of time.
46. (original) The network appliance of claim 44, wherein the prescribed delay comprises delay until network resource availability reaches a certain level.
47. (original) A method for controlling distribution of network communications via a communications network, the method comprising:
tracking a number of inbound connections for each of a plurality of communications hosts; and
altering a connection build process for a certain of said plurality of communications hosts to control a flow of said certain host's network communications.
48. (original) The method of claim 47, wherein the connection build process relates to a TCP connection.

49. (original) The method of claim 47, wherein the connection build process relates to an SMTP connection.
50. (original) The method of claim 47, wherein altering the connection build process comprises slowing the connection build process for said certain host.
51. (original) The method of claim 47, wherein altering the connection build process comprises stopping the connection build process for said certain host.
52. (currently amended) A system for controlling distribution of network communications via a communications network, the system comprising
a mail server operating within an internal communications network for distribution of incoming network communications received via an external communications network; and
a network appliance logically positioned between the mail server and the external communications network, the network appliance being specially configured to selectively allocate ~~resources~~ network connections of the internal communications network for delivery of the incoming network communications to the mail server, the network appliance being further configured to allocate ~~resources~~ network connections to the incoming network communications in a prioritized manner.
53. (original) The method of claim 52, wherein the prioritized manner provides for allocation of resources to an incoming network communication that provides for delivery of higher priority network communications before lower priority network communications.
54. (cancelled)
55. (original) A network appliance for controlling distribution of network communications via a communications network, the network appliance receiving incoming network communication connections, the network appliance being capable of allocating network connections for delivering network communications, the network appliance selectively allocating network connections for each of a plurality of network communications in an order to achieve a prioritization effect.

56. (original) The network appliance of claim 55, the prioritization effect comprising delaying allocation of a network connection for delivery of a first network communication having a first priority, and allocation of the network connection for delivery of a second network communication having a second priority higher than the first priority, allocation of the network connection for delivery of the second network communication being performed before allocation of the network communication for delivery of the first network communication.

57. (original) The network appliance of claim 55, the prioritization effect comprising allocating a network connection for delivery of a relatively high priority network communication before allocating the network connection for delivery of a relatively low priority network communication.

58. (original) The network appliance of claim 55, the prioritization effect comprising delaying allocation of a network connection for a given path to meet predetermined preference criteria.

59. (original) The network appliance of claim 55, wherein the predetermined preference criteria provides that network communications from a certain path should not be delivered if utilization of network resources presently exceeds a predetermined threshold.

60. (original) The network appliance of claim 55, wherein the predetermined preference criteria provides that network communications from a certain sender should not be delivered if utilization of network resources presently exceeds a predetermined threshold.

61. (original) The network appliance of claim 55, wherein the predetermined preference criteria provides that network communications having a certain priority level should not be delivered if utilization of network resources presently exceeds a predetermined threshold.

62. (currently amended) A method for controlling distribution of network communications from a sender to a receiver via a communications network, the method comprising the steps of:

identifying a particular network communication intended for delivery to a recipient;
identifying a priority level corresponding to the particular network communication;
determining a prescribed delay for the identified priority level; and
delaying delivery of the particular network communication to the intended recipient according to the prescribed delay, wherein delaying delivery of the particular network communication comprises controlling allocation of network connections for delivery of some network communications to cause other network communications having priority levels higher than the particular network communication to be delivered before delivery of the particular network communication.

63. (original) The method of claim 62, wherein the identifying, determining and delaying are performed by a network appliance capable of communicating via the communications network, the network appliance being logically positioned between the sender and the receiver.

64. (currently amended) The method of claim 62, wherein identifying the priority level comprises identifying a network address of a mail system of the sender from which the particular network communication originated.

65. (original) The method of claim 62, wherein identifying the priority level comprises identifying a network address of a mail system of an intermediary along a network path from the sender to the receiver.

66. (currently amended) The method of claim 62, wherein identifying the priority level comprises identifying a domain name of the a mail system of the sender from which the particular network communication originated.

67. (original) The method of claim 62, wherein identifying the priority level comprises identifying a domain name of a mail system of an intermediary along a network path from the sender to the receiver.

68. (currently amended) The method of claim 62, wherein identifying the priority level comprises identifying network path information found in a header of the particular network communication.
69. (currently amended) The method of claim 68, wherein identifying the network path information comprises referencing TCP or IP packet headers of the particular network communication.
70. (currently amended) The method of claim 62, wherein identifying the priority level comprises identifying network path information of a mail system having previously processed the particular network communication.
71. (currently amended) The method of claim 62, wherein identifying the priority level comprises identifying network path information of a mail system having previously routed the particular network communication.
72. (currently amended) The method of claim 62, wherein identifying the priority level comprises identifying a sender identity domain associated with the sender of the particular network communication.
73. (currently amended) The method of claim 62, wherein identifying the sender identity domain comprises referencing SMTP header information of the particular network communication.
74. (currently amended) The method of claim 62, wherein identifying the priority level comprises identifying a geographic origin of the particular network communication.
75. (original) The method of claim 62, wherein the prescribed delay is established according to a recorded preference of the receiver.
76. (original) The method of claim 62, wherein the prescribed delay is established according to a preference of an intermediary, the intermediary being logically positioned between the sender and the receiver for transmitting network communications from the sender to the receiver.
77. (canceled)

78. (original) A method for controlling distribution of network communications via a communications network, the method comprising:

identifying a plurality of network communications, each having a respective priority level;

allocating network connections for delivery of network communications to allocate network connections as a function of a respective priority level of each of the plurality of network communications.

79. (original) The method of claim 78, wherein said allocating comprises allocating a network connection to a certain network communication having a first priority level before allocating the network connection to another network communication having a second priority level lower than the first priority level.

80. (original) The method of claim 78, wherein said allocating comprises delaying transmission of a certain network communication having a first priority level until after transmission of another network communication having a second priority level higher than the first priority level.

81. (original) The method of claim 78, wherein said allocating comprises causing delivery of a certain network communication having a first priority level to occur after delivery of another network communication having a second priority level higher than the first priority level.

82. (currently amended) A system for controlling distribution of network communications via a communications network, the system comprising

a mail server operating within an internal communications network for distribution of incoming network communications received via an external communications network; and

a network appliance logically positioned between the mail server and the external communications network, the network appliance being specially configured to selectively allocate ~~resources~~ network connections of the internal communications network for delivery of the incoming network communications to the mail server, the network appliance being further configured to allocate ~~resources~~ network connections to the incoming network

communications to ensure that network communications received along a certain network path are delivered at a rate that consumes no more than a certain percentage of the ~~resources~~ network connections of the internal communications network.

83. (original) The system of claim 82, wherein the certain percentage is established by a predetermined preference setting.

84. (original) The system of claim 83, wherein the preference setting is established by the receiver.

85. (currently amended) A network appliance for controlling distribution of network communications via an external communications network for delivery within an internal communications network, the network appliance being specially configured to selectively allocate ~~resources~~ network connections of the internal communications network that may be used for delivery of network communications, the ~~resources~~ network connections being selectively allocated to ensure that network communications received along a certain network path are delivered at a rate that consumes no more than a certain percentage of the ~~resources~~ network connections of the internal communications network.

86. (original) The system of claim 85, wherein the certain percentage is established by a predetermined preference setting.

87. (original) The system of claim 86, wherein the preference setting is established by the receiver.